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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,971	02/18/2004	Paresh Chatterjee	03-2043	1681

24319 7590 03/31/2006

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EXAMINER

MOAZZAMI, NASSER G

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 03/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/780,971

Applicant(s)

CHATTERJEE ET AL.

Examiner

Nasser G. Moazzami

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 is/are allowed.
- 6) ☒ Claim(s) 1,4,5,8,10,12,15 and 16 is/are rejected.
- 7) ☒ Claim(s) 2,3,6,7,11,13,14,17 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hauck (US Patent No. 6,912,669).

As for claim 1, Hauck discloses a method for maintaining cache coherency between a first controller and a peer controller **[maintaining cache coherency in a storage system (column 1, lines 9-12)]**, the method comprising: updating cache data in a write-back cache memory in the first controller in response to read or write requests from an attached host **[host write to first controller (column 5, lines 28-30, and 44-46)]**; buffering information regarding changes to the cache memory in the first controller that affect cache coherency of a mirrored cache memory in the peer controller; and transmitting the buffered information and associated cache data from the first controller to the peer controller to maintain cache coherency between the cache memory of the first controller and that mirrored cache memory of the peer controller **[cache in each**

Art Unit: 2187

**controller is partitioned into two segments, a read/write segment and a copy segment (column 6, lines 2-4); mirroring the data to the second controller's cache (column 5, line 43 through column 6, line 52)], wherein the buffered information serves to maintain cache coherency without requiring a step of informing the peer controller of any cache flush operation performed in the first controller [avoiding disk flush (column 6, line 16)].**

As for claims 10, and 12, claims 10, and 12 encompass the same scope of the invention as that of claim 1. Therefore, claims 10, and 12 are rejected for the same reasons as stated above with respect to claim 1.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-5, 15-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauck in view of well known feature in which official notice is taken.

As for claims 4-5, Hauck discloses the claimed invention, but fails to specifically teach transmitting a SCSI Write Buffer command for transmitting the buffered information and associated cache data using a single command structure. However,

Art Unit: 2187

transmitting information using a SCSI command is well known in the art and as is evidenced on page 20 of applicant's disclosure, this is one example for transmitting information. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the current invention to use SCSI command for transmitting information from the first controller to the second controller.

As for claims 15-16, and 19, claims 15-16, and 19 encompass the same scope of the invention as those of claims 4-5. Therefore, claims 15-16, and 19 are rejected for the same reasons as stated above with respect to claims 4-5.

#### ***Allowable Subject Matter***

5. Claims 2-3, 6-7, 11, 13-14, and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 9 is allowed.

#### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser G. Moazzami whose telephone number is (571) 272-4195. The examiner can normally be reached on 7:00AM-5:30PM.

Art Unit: 2187

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**NASSER MOAZZAMI**  
**PRIMARY EXAMINER**

03/28/2006